

Work Order ID **155355**

155355

Page 1

Thursday, January 12, 2017 3:40:48 PM

Item ID: 647.3914 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Breakaway Tip, Long
 Start Date: 1/19/2017 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 1/25/2017 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 9-89 Date: JAN 13 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.3900	C2								
100	BAND SAW	0.00							DAS 08 9-89
100									
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut Blank at 14.500"								
110	HAAS CNC VERTICAL MACHINING #1	0.00							DAS 08 9-89
110									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine per folio FB315								
	DWG REV: <u>C</u>								
	FOLIO REV: <u>AA</u>								
	2- deburr and break all sharp edges								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Certification of Comformity is required

FEB 17 2017

DAS
13
9-59

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 155355

Thursday, January 12, 2017 3:40:48 PM

155355

Page 3

Item ID: 647.3914

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Breakaway Tip, Long

Start Date: 1/19/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 1/25/2017 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

Packaging

Memo

0.00

Packaging

Lex 2017-03-9

155

QC5- Inspect part completeness to step on W/O

0.00

155

QC

Memo

0.00

Quality Control

2.0 mils thickness primer

6 DAS 38 9-89 MAR 10 2017

180

Identify as per dwg & Stock Location: cc6009

0.00

180

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

6 MAR 13 2017 DAS 6 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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SAC QE								Lead hand / Supervisor Approval Verification																																																									
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Misidentified ☐	Past Due ☐																																																																

Work Order ID 155355***155355***

Page 4

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N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Breakaway Tip, Long

Start Date: 1/19/2017 Start Qty: 6.00

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Cust Item ID:

Required Date: 1/25/2017 Req'd Qty: 6.00

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Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

MAR 13 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
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Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

Thursday, January 12, 2017 3:40:48 PM

Page 1

Work Order ID: 155355

155355

Parent Item: 647.3914

647 3914

Parent Item Name: Breakaway Tip, Long

Start Date: 1/19/2017

Required Date: 1/25/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV. A NEW ISSUE JFS 14/06/19 VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B2.000X00.75 0		Purchased	No			100	f	14.2793	1.209	7.63579			

M7075T6B2 000X00 750

De 17-01-12

7075-T6 BAR 2.000' X 0.750"

Location

Loc Qty

Loc Code

MAT001

11.2293

→ 134327

11.2293

MAT005

3.05

m131022

2

m134214

1.05

7.27571

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

		DWG NO. 647.3900 REV: C PREPARED BY M. ANDECK DATE: 05/04/15 EFFECT ON DWG ☐ INC. ☒ UNINC.		DWG TITLE: DEFLECTORS		APPROVED BY: ENGR [Signature] MFG [Signature] QC [Signature]		dba DART AEROSPACE APICAL INDUSTRIES, INC. TRANSACTION CODES (T/C) R-DELETE A-ADD C-CREATE R-REVISE		REASON: REVISED TOLERANCE AND NOTES D-15-01	
ENGINEERING CHANGE NOTICE NO. 04948		SHEET 1 OF 2		CURRENT ORDER		ECR:		ECR:		D-15-01	

DART AEROSPACE

APICAL INDUSTRIES, INC.
dba DART AEROSPACE

TRANSACTION CODES (TC)
A-ADD
C-CREATE
D-DELETE
R-REVISE

SHEET 1, ZONE B1 IS:

DOCUMENTS EFFECTED:		☐ PATTERN ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☒ BOM ☐ CHANGE CATEGORY ☐ MAJOR ☒ MINOR				DER REVIEW REQUIRED ☐ YES ☒ NO	
F/N TC	PART NUMBER	QTY			DESCRIPTION	MATERIAL	SPECIFICATION
		.3903	.3902	.3901			
11	R	647,3917	2		DOUBLER		

NOTES:

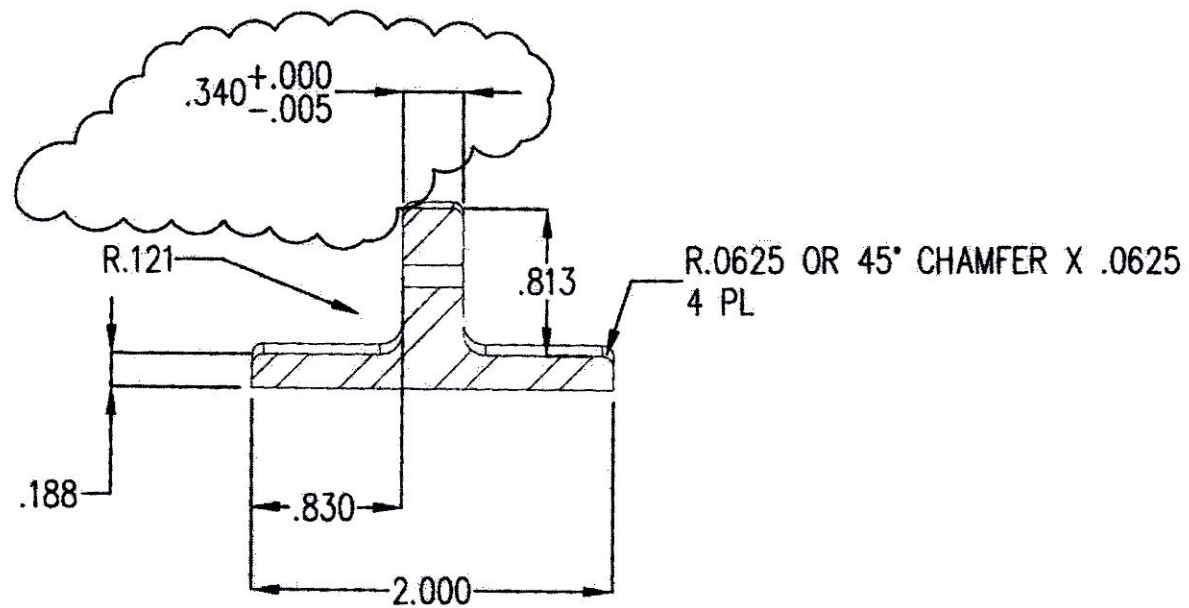
- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER
PRIME IAW MIL-P-23377J TYPE I, CLASS N;
1-2 MIL MAX.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER
PRIME IAW MIL-P-23377J TYPE I, CLASS N;
1-2 MIL MAX.

4.

10 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/4.

NO. 15335
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
RETURN TO
SHOP COPY

51-eatl
can



SECTION AT-AT

SHEET 11, ZONE C1 IS:

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04556

SHEET 1 OF 2

DWG NO. 647.3900

REV: C

PREPARED BY D. MEJIA

DATE: 06/10/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY: ENGR

MFG

QC

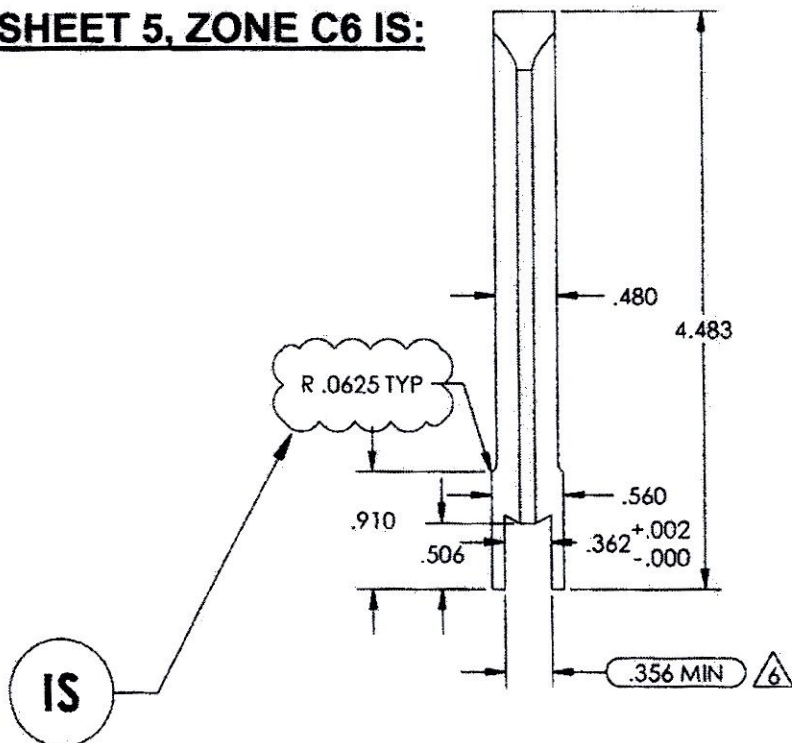
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

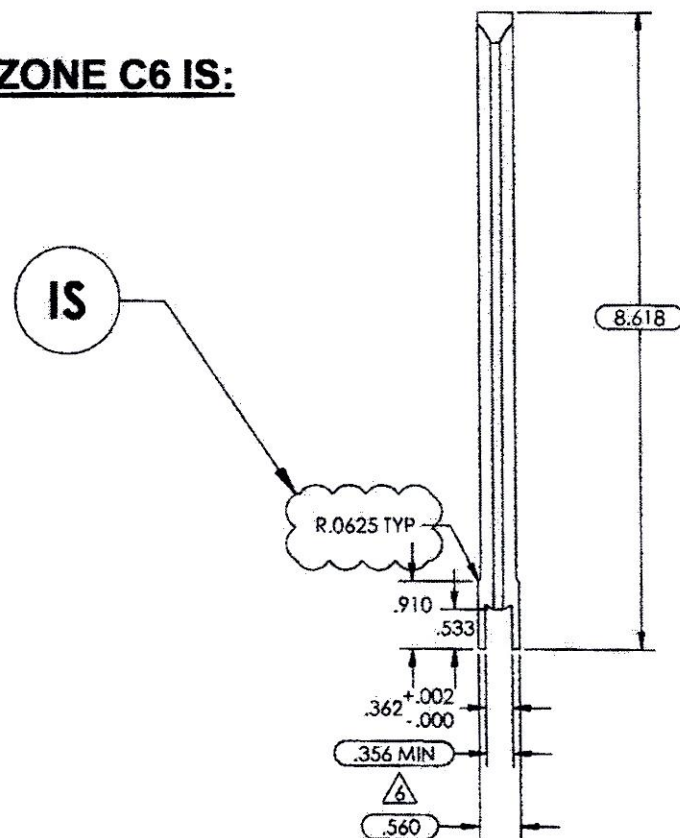
REASON: CHANGED P/N, DIMENSIONS & REVISED BOM

ECR: D-14-04

SHEET 5, ZONE C6 IS:

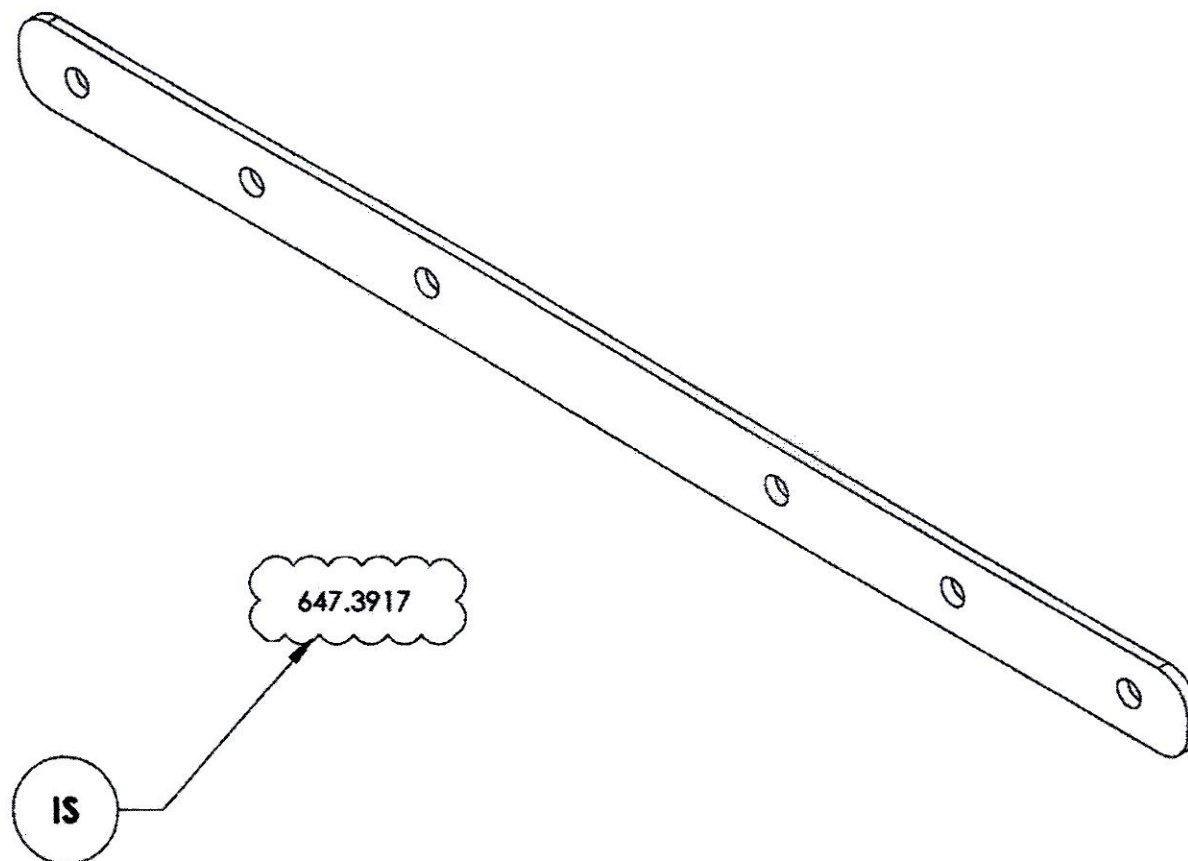


SHEET 6, ZONE C6 IS:



SHEET 1, BOM IS:

11	R	647.3917	2		DOUBLER		
F/N	TC	PART NUMBER	3903	3902	3901	DESCRIPTION	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:						CHANGE CATEGORY	DER REVIEW REQUIRED
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM						☐ MAJOR ☒ MINOR	☐ YES ☒ NO

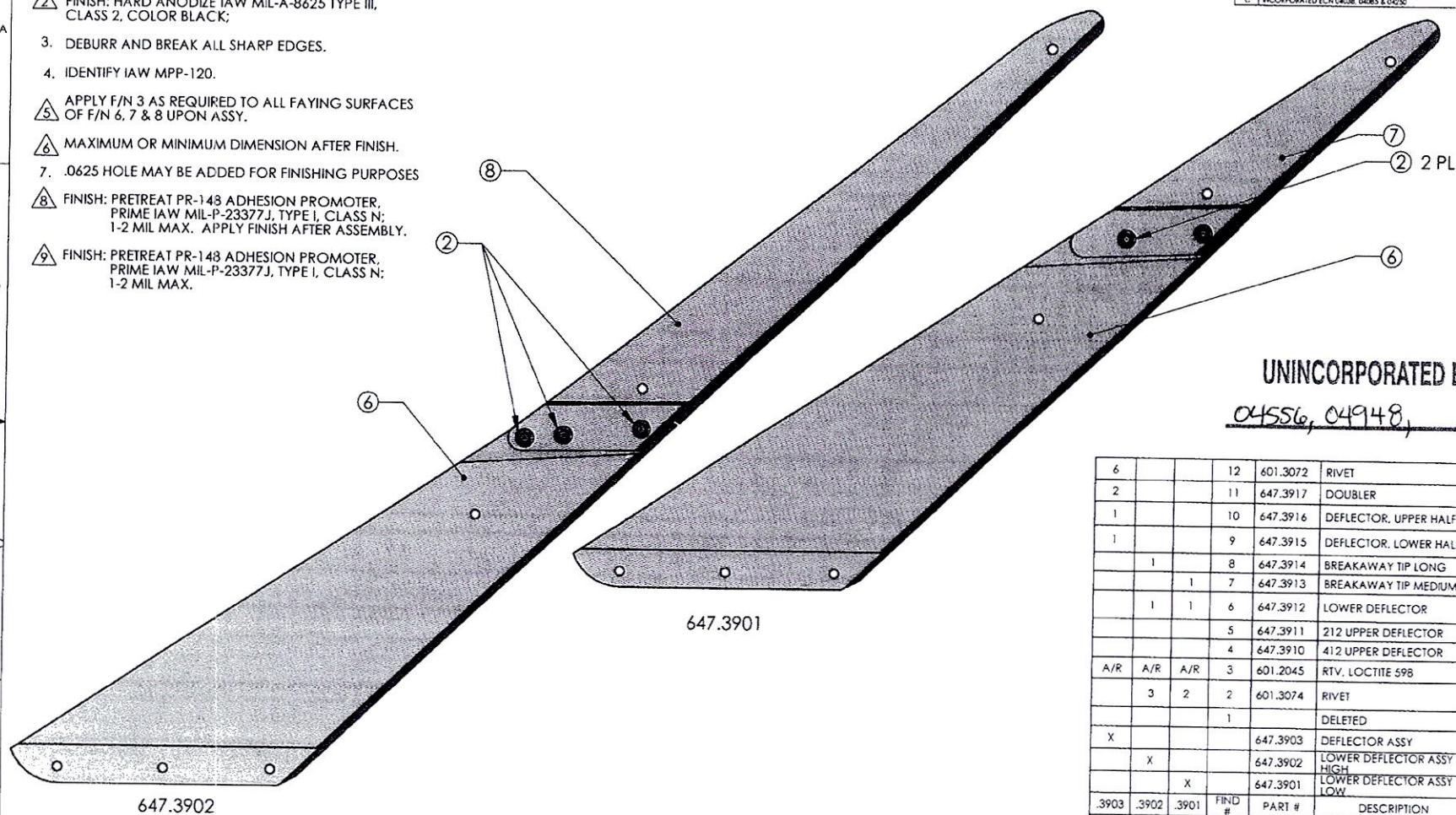
SHEET 12, ZONE B5 IS:

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
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- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.

REV.	DESCRIPTION	DATE	APPROVED
N/C	LAST PROTOTYPE RELEASE: PR1		N/C
N/C	INITIAL RELEASE	05/10/09	P. BRAVO
A	INCORPORATED ECN 02864, 03539 & 03591	07/24/12	P. BRAVO
B	INCORPORATED ECN 04025	08/02/13	P. BRAVO
C	INCORPORATED ECN 04038, 04085 & 04250	11/18/13	P. BRAVO



UNINCORPORATED ECN(s)

04556, 04948,

6			12	601.3072	RIVET	CR3213-6-9	
2			11	647.3917	DOUBLER		
1			10	647.3916	DEFLECTOR, UPPER HALF	△	△
1			9	647.3915	DEFLECTOR, LOWER HALF	△	△
	1		8	647.3914	BREAKAWAY TIP LONG	△	△△
		1	7	647.3913	BREAKAWAY TIP MEDIUM	△	△△
	1	1	6	647.3912	LOWER DEFLECTOR	△	△△
			5	647.3911	212 UPPER DEFLECTOR	△	△△
			4	647.3910	412 UPPER DEFLECTOR	△	△△
A/R	A/R	A/R	3	601.2045	RTV, LOCTITE 598		△
	3	2	2	601.3074	RIVET	MISDATEAD 6-12	
			1		DELETED		
X				647.3903	DEFLECTOR ASSY		△
	X			647.3902	LOWER DEFLECTOR ASSY HIGH		
		X		647.3901	LOWER DEFLECTOR ASSY LOW		
.3903	.3902	.3901	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY							
NEXT ASSY (S)				PARTS LIST			
647.3800				ORIGINAL DATE (MM-DD-YY) 09-10-09			
				DRAWN BY D.SCHUP			
				CHECKED D.BARKER			
				DRAWING APPROVAL P. BRAVO			
				CONTRACT NO.			
				UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE 1 PLACE DECIMALS 1/16 ANGLES 1/2°			
				APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
				DEFLECTORS			
				REV. C			
				SCALE NONE			
				SHEET 1 OF 12			

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.125 X 45.0° TYP

SECTION B-B

Ø.177 THRU 3PL

.266 X 17.9°

DETAIL A

.045

.603

.923

R.915

4.220±.002

2.110±.002

R.279

R3.406

15.896

15.304

15.046

B

B

Ø.189

40.2°

6.446

.312

0

18.502

18.127

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8.599

6.253

1.700

.777

0



DETAIL C

.375

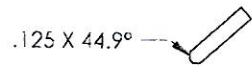
15.896



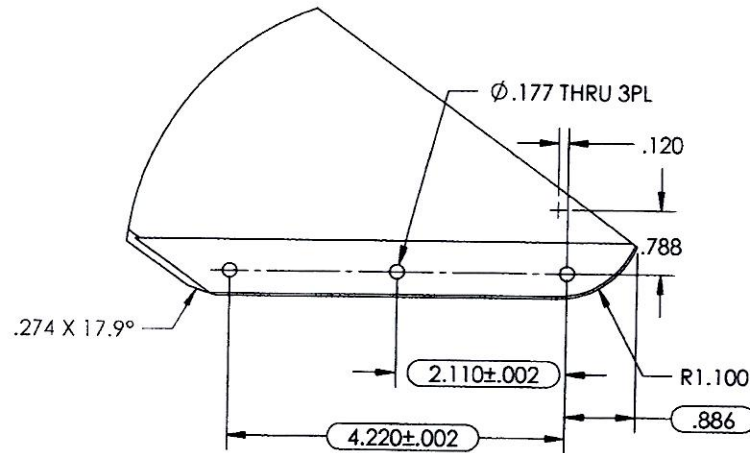
647.3911

ORIGINAL DATE (WEEK-15) 06-10-09	APICAL INDUSTRIES		
DRAWN BY D. SCHUB	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
DRAWING APPROVAL P. BRADY			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DEFLECTORS ARE FINISHED TO FINISHES ARE: 2 PLATE DEFLECTORS 2001 2 PLATE DEFLECTORS 2002 ANGLES 6" x 5"			
SIZE E	CAGE CODE 07M76	DWG. NO. 647.3900	REV C
SCALE NONE			SHEET 2 OF 12

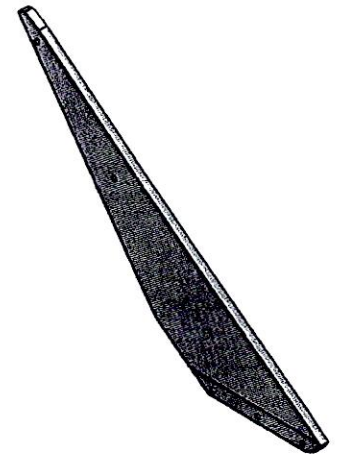
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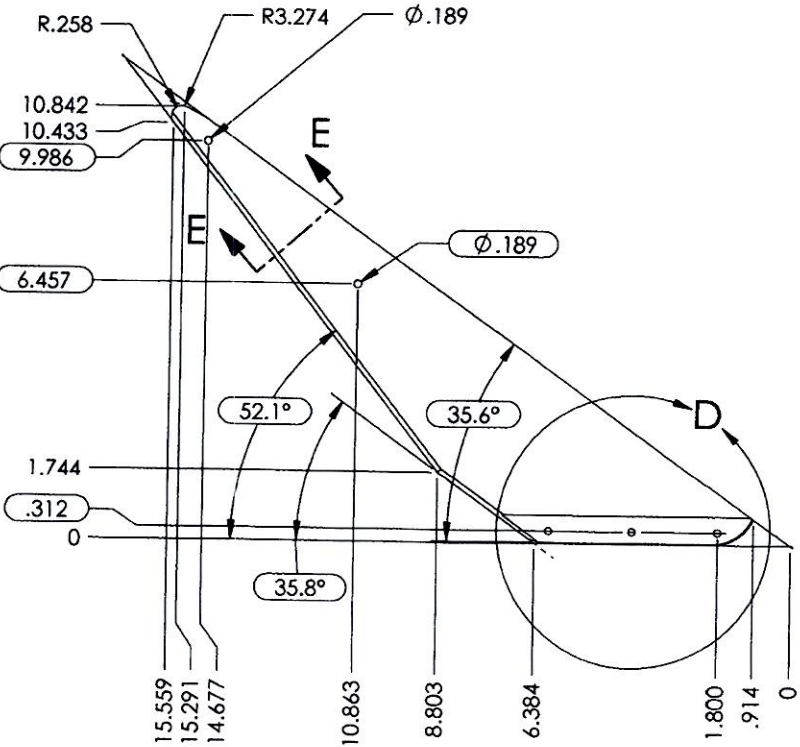
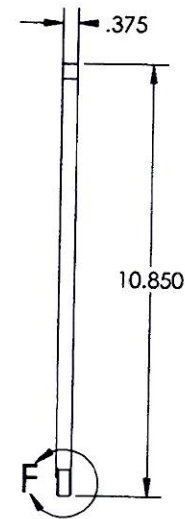
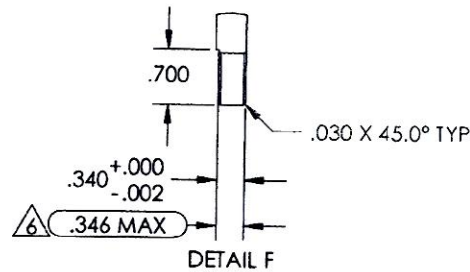
SECTION E-E



DETAIL D

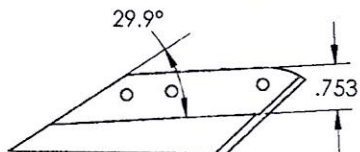


647.3910

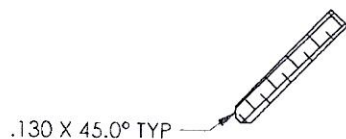


ORIGINAL DATE (PAC-DA-18) ON 10-09		APICAL INDUSTRIES	
DRAWN BY D. SCHUP		2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL P. BRAVO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV C
CAGE CODE 07M26		DWG. NO. 647.3900	SCALE: NONE
SHEET 3 OF 12			

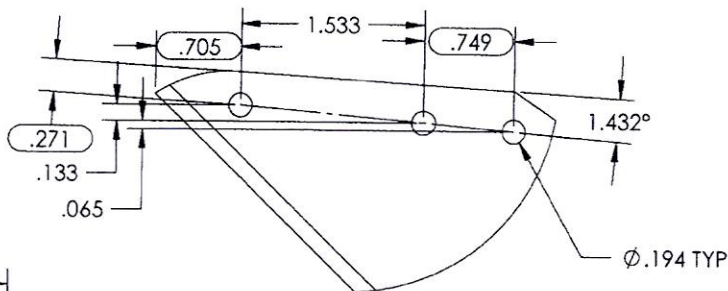
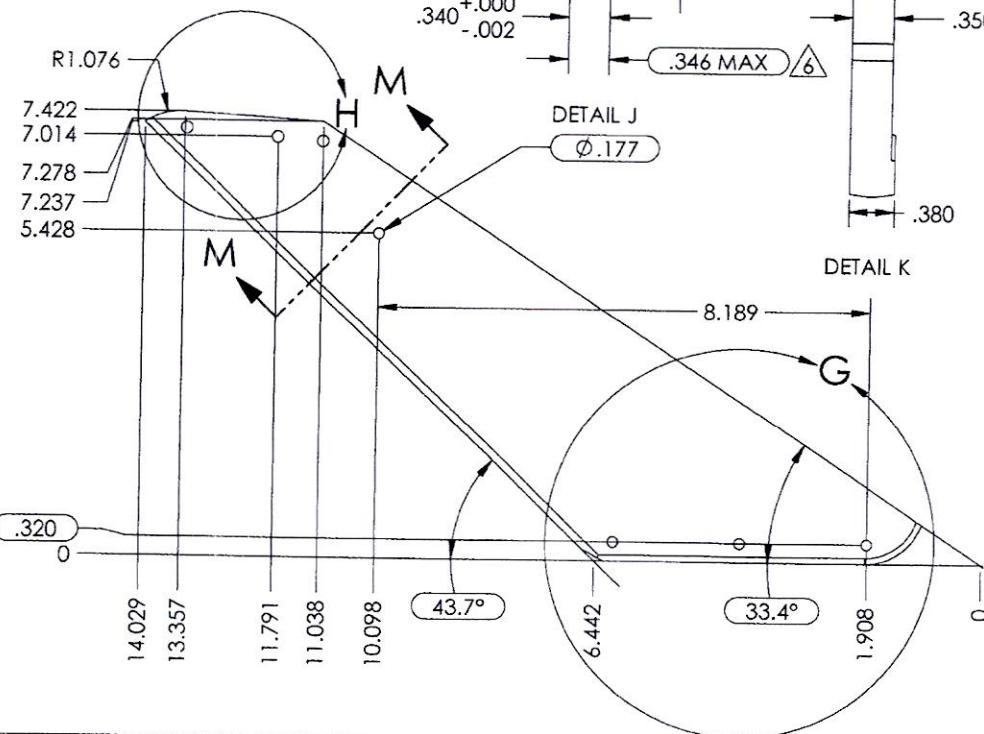
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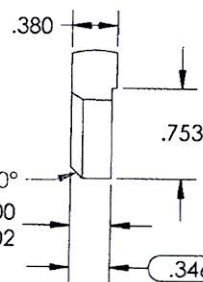
SECTION L-L



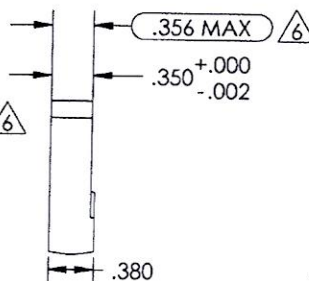
SECTION M-M



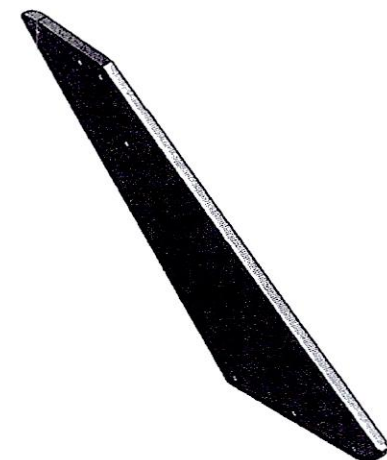
DETAIL H



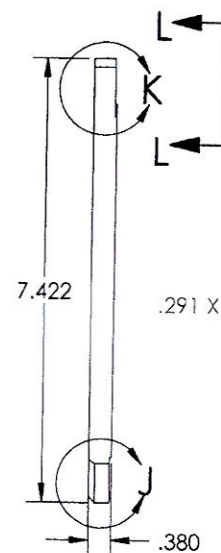
DETAIL J



DETAIL K



647.3912



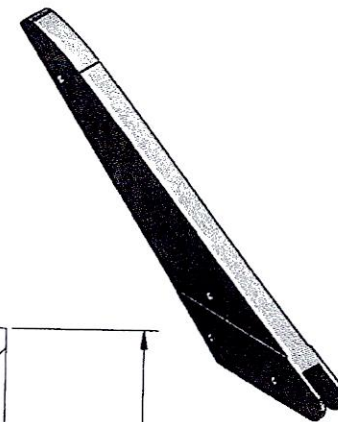
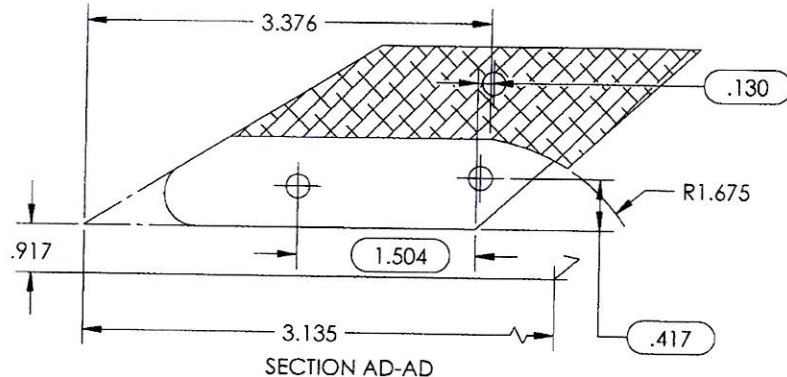
DETAIL G

ORIGINAL DATE 10-01-1981 09-10-00		APICAL INDUSTRIES	
DRAWN BY C. SCHUB		2608 TEMPLE HEIGHTS DR.	
CHECKED BY P. BAUO		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SRE CASE CODE B 07M26	REV. C
DWG NO. 647.3900		SCALE NONE	
SHEET 4 OF 12			

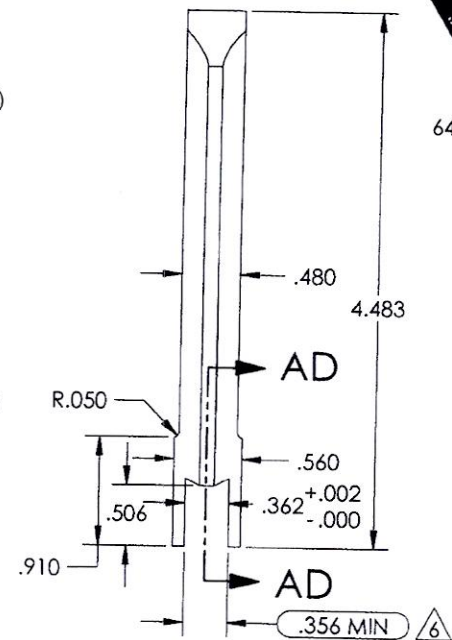
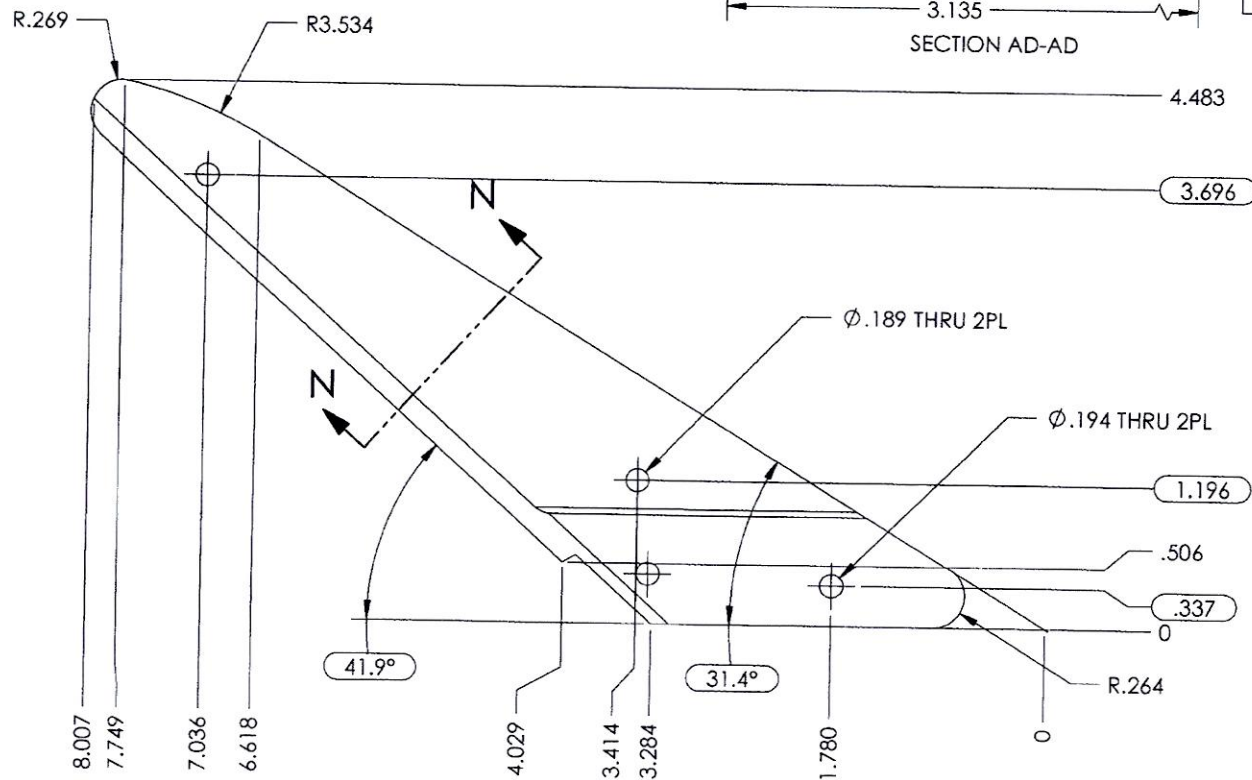
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.180 X 45.0° TYP

SECTION N-N



647.3913

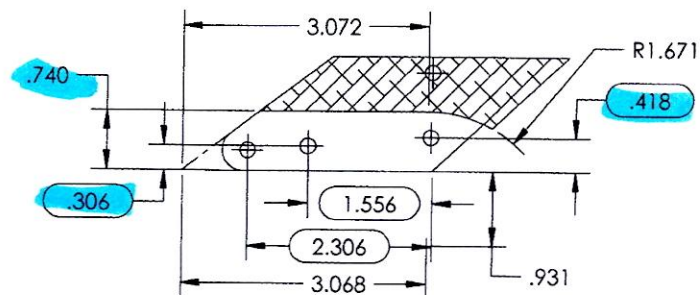


ORIGINAL DATE 10/01/00		APICAL INDUSTRIES	
DRAWN BY D. SCHUB		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D. BARKER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRADY		DEFLECTORS	
CONTRACT NO.		SEE CAGE CODE DWG NO. 647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°		REV C	SHEET 5 OF 12

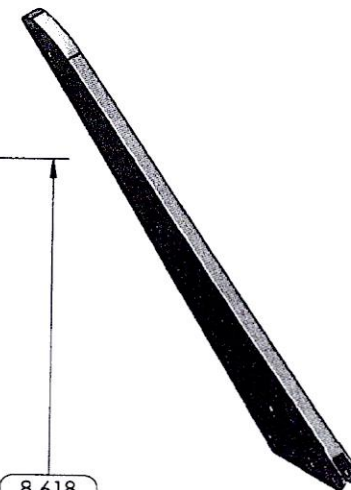
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175 X 45.0° TYP

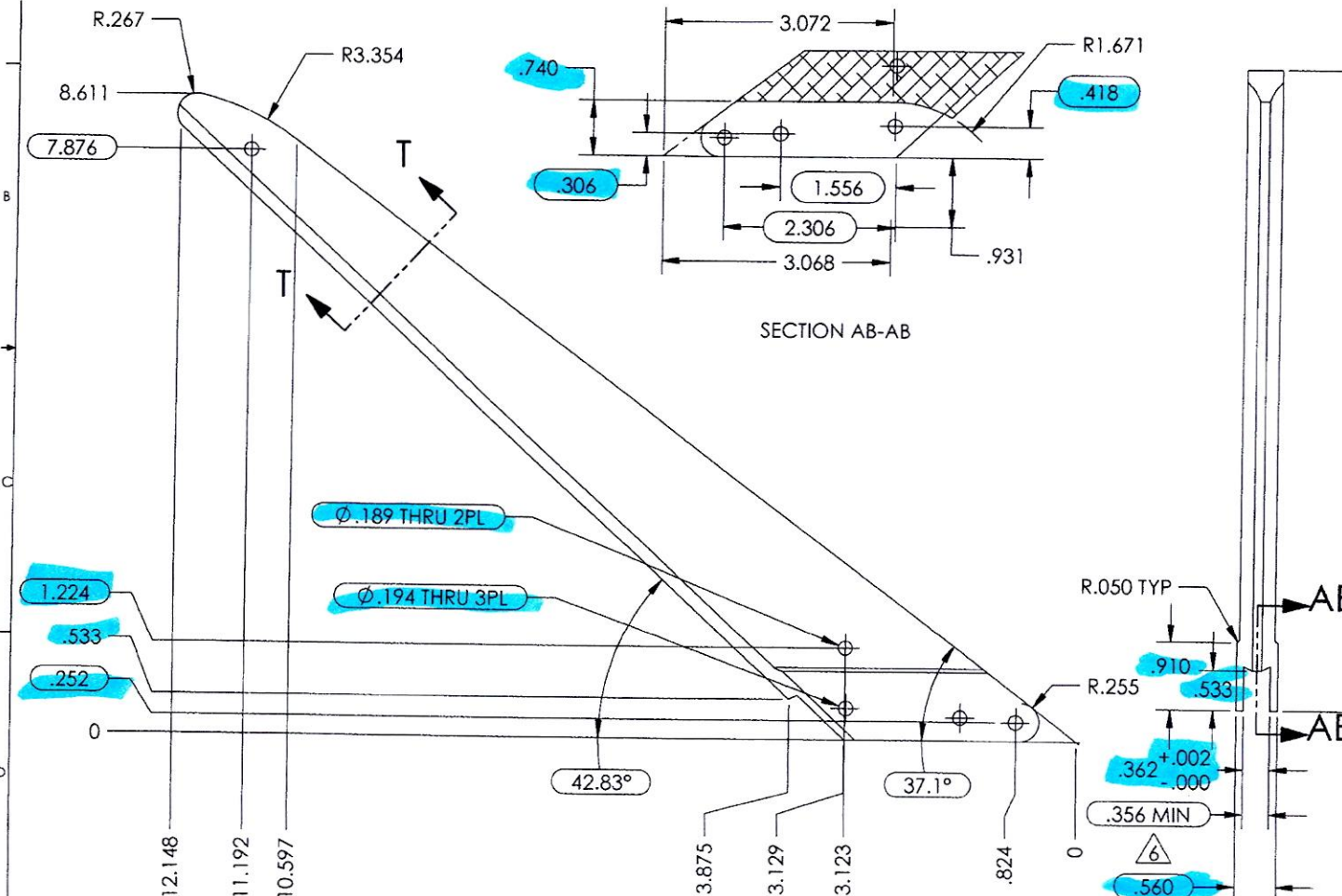
SECTION T-T



SECTION AB-AB

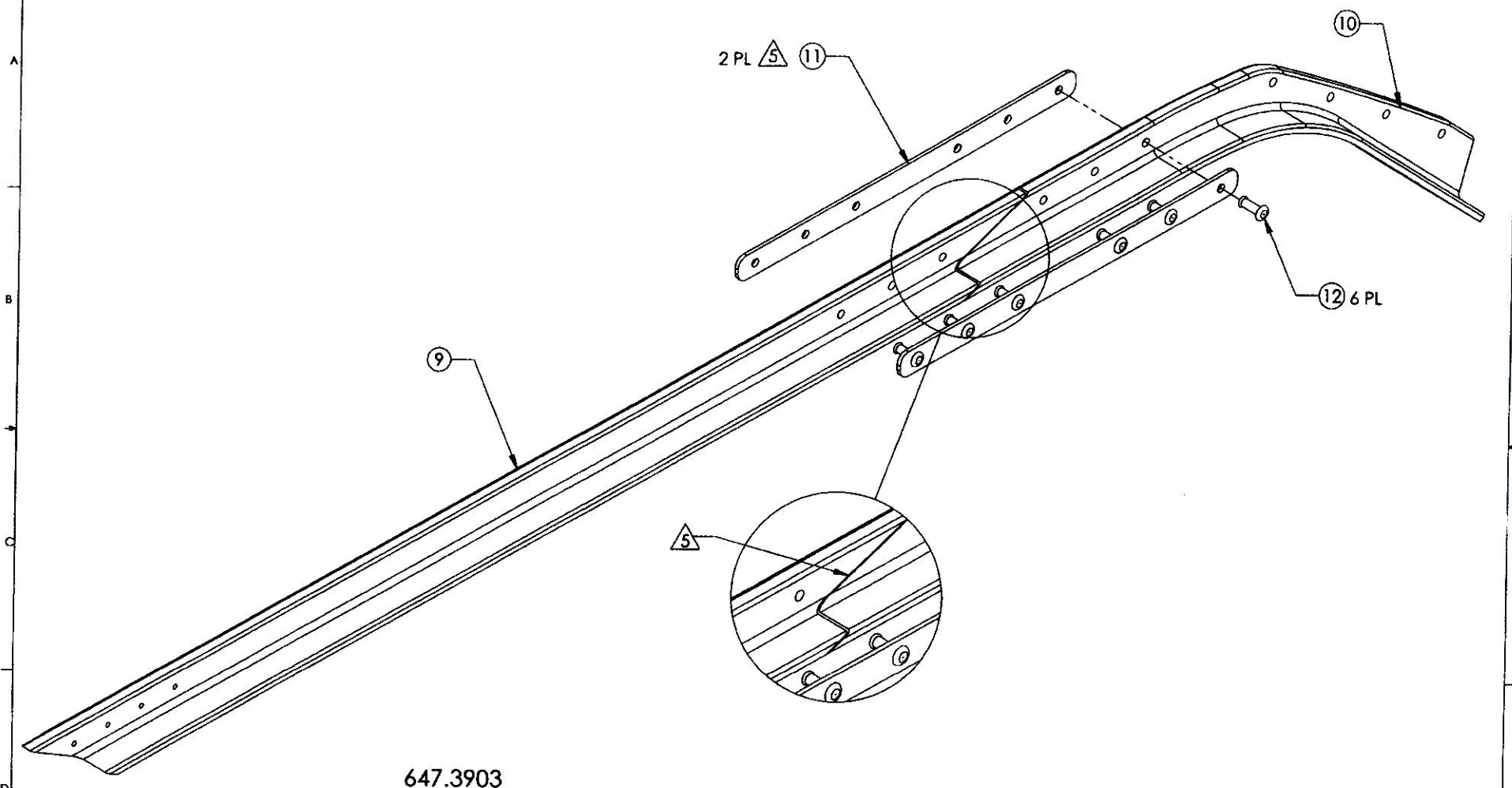


647.3914



ORIGINAL DATE (MOC-CA-18) OF 12/06		APICAL INDUSTRIES	
DRAWN BY D. SCHUP		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY D. BARNER		DEFLECTORS	
DRAWING APPROVAL P. BRAVO		SHEET 6 OF 12	
REV. 002 CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		CAGE CODE B 07M26	
		DWG. NO. 647.3900	
		REV. C	

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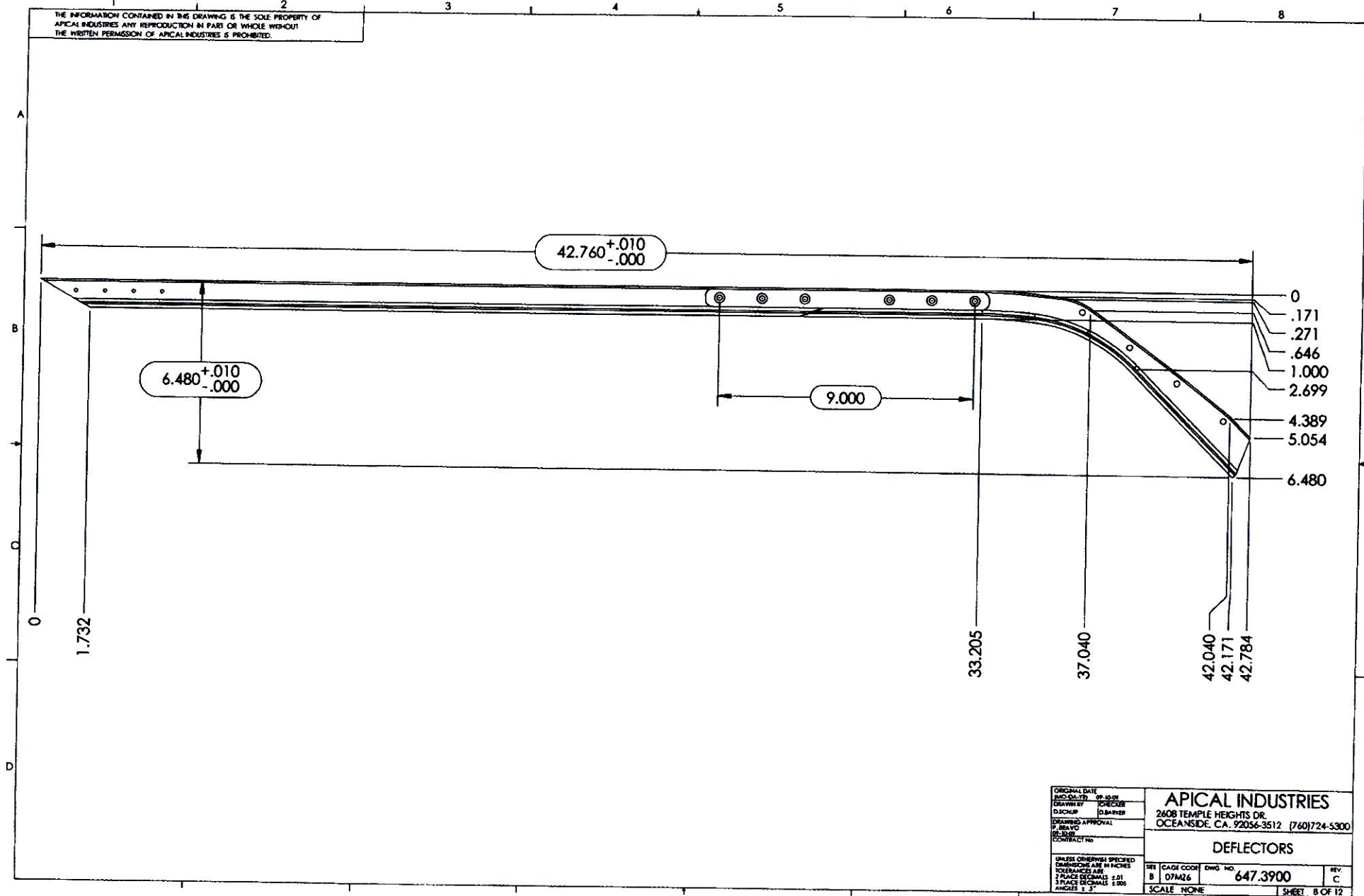


ORIGINAL DATE 09-10-99			
DRAWN BY D. SCHWAB			
CHECKED BY D. BARNER			
DRAWING APPROVAL P. BARNER			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
REV.	CAGE CODE	DWG. NO.	REV.
B	07MA26	647.3900	C
SCALE: NONE		SHEET 7 OF 12	

APICAL INDUSTRIES
2408 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

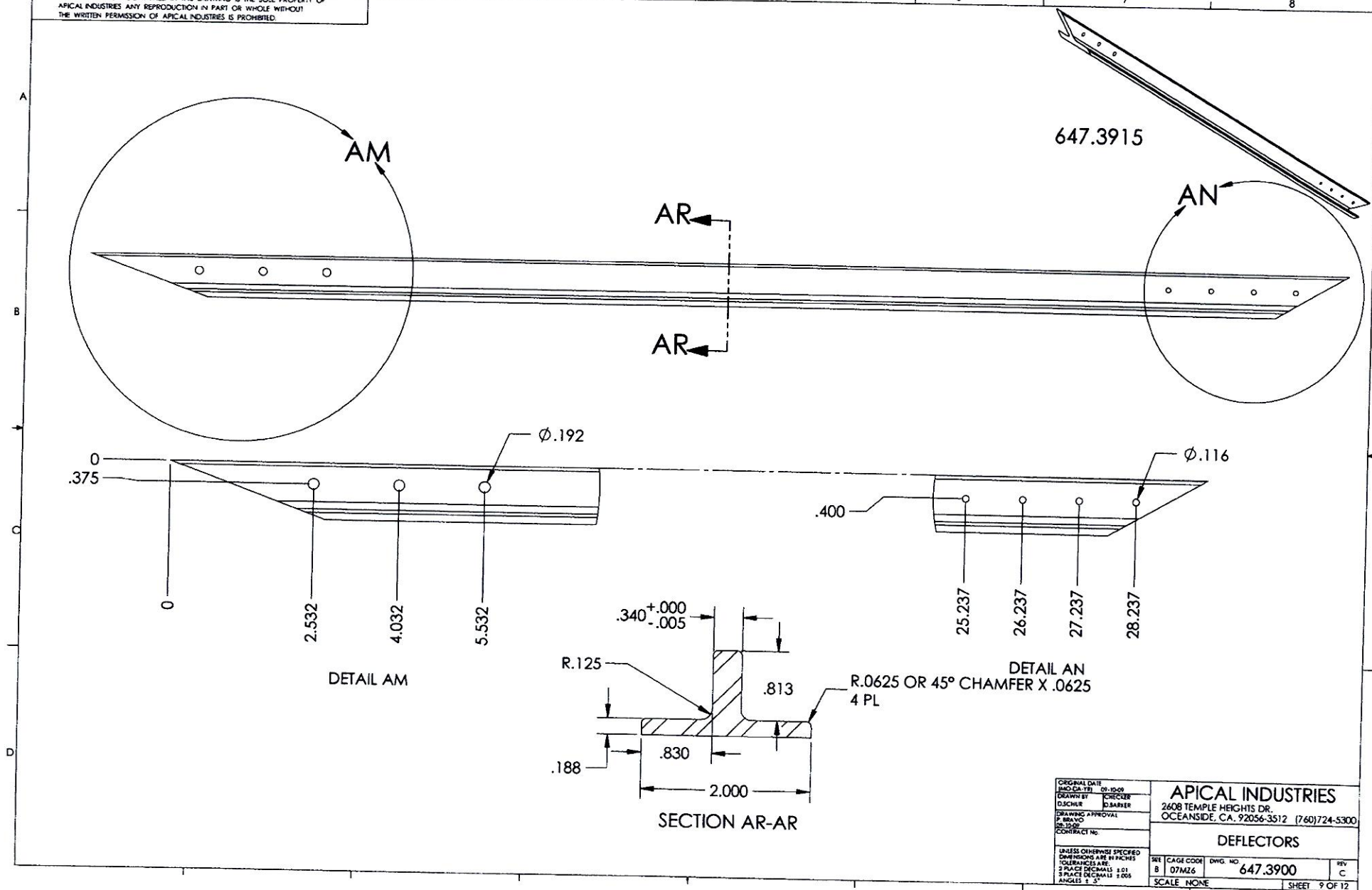
DEFLECTORS

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ORIGINAL DATE 12-01-79 09:10:00		APICAL INDUSTRIES	
DRAWN BY D.SCHUP		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D.BARNER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAY		DEFLECTORS	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. C
CAGE CODE 07M26		DWG. NO. 647.3900	
SHEET B OF 12		REV. C	

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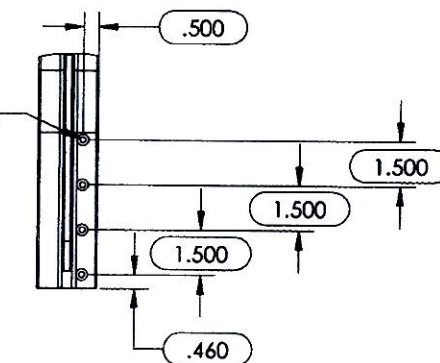


ORIGINAL DATE (MM-DD-YY) 01-10-00		APICAL INDUSTRIES	
DRAWN BY: J. SCHUR		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. SCHUR		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAYNO		DEFLECTORS	
CONTRACT NO.		647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SHEET 9 OF 12	REV C

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4X $\varnothing .196 \pm .010$ THRU ALL
✓ $\varnothing .385 \pm .020 \times 100^\circ \pm 1.000^\circ$

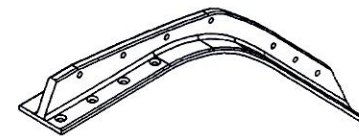


DETAIL AK

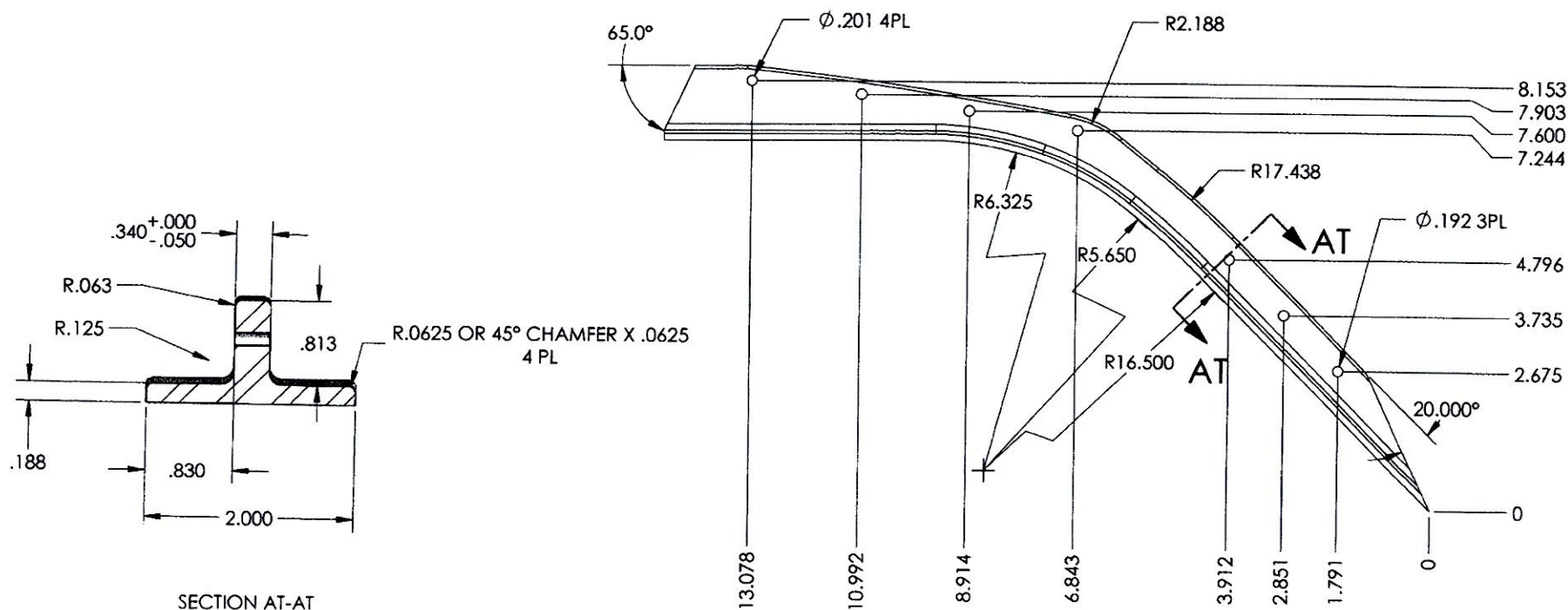
647.3915

ORIGINAL DATE 10-01-1981 09-10-09		APICAL INDUSTRIES	
DRAWN BY D. SCHUP		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BEAVIS		DEFLECTORS	
DRAWING APPROVAL P. BEAVIS		SCALE NONE	
CONTRACT NO.		SHEET 10 OF 12	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		SER B	CAGE CODE 07M26
		DWG. NO. 647.3900	REV C

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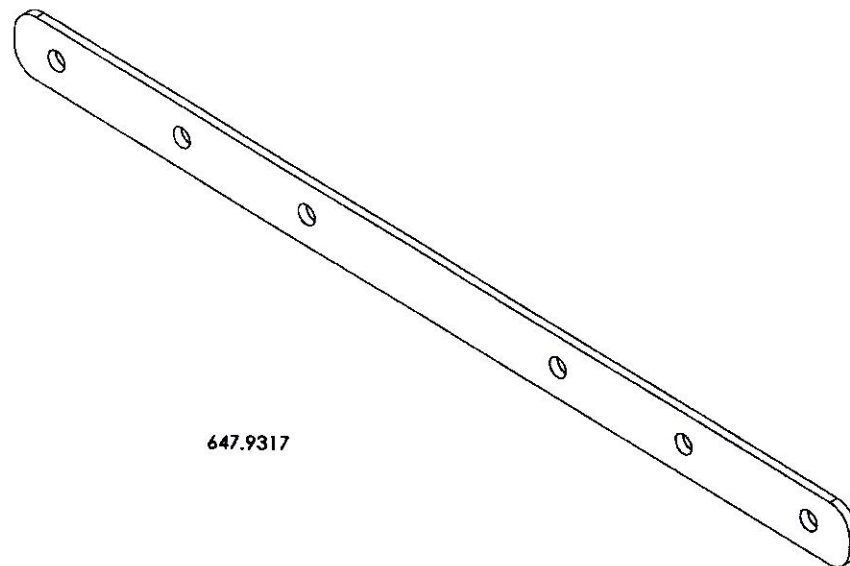
647.3916



SECTION AT-AT

ORIGINAL DATE 06-15-09		APICAL INDUSTRIES	
DRAWN BY D. SCHUR	CHECKED D. SCHUR	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTORS	
CONTRACT NO.		647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. C
SCALE: NONE		SHEET 11 OF 12	

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R.250
4 PL

.625

0

.500

2.000

3.500

6.500

8.000

9.500

10.000

.090

Ø.196
6 PL

ORIGINAL DATE
BY: 08-10-00
DRAWN BY: J. C. REESE
DISCUSS: J. C. REESE
DRAWING APPROVAL
BY: J. C. REESE
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACES DECIMALS ±.01
3 PLACES DECIMALS ±.005
ANGLES ±.1°

APICAL INDUSTRIES
2408 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

REV.	C	DATE	07/24/00
BY	J. C. REESE	DATE	07/24/00
SCALE	NONE	SHEET	12 OF 12



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO35353**

Purchase Order Date 2/17/2017

PO Print Date 2/22/2017

Page Number 3 of 6

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

Line Total: \$65.50

7	155468	647.0110 ROOF DOUBLER REV. A	3/7/2017	10.00	\$43.00	\$430.00
---	--------	---------------------------------	----------	-------	---------	----------

Yes

2/7/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total: \$430.00

8	154535	647.1712 GUSSET REV. E	3/7/2017	4.00	\$12.65	\$50.60
---	--------	------------------------	----------	------	---------	---------

Yes

2/7/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total: \$50.60

9 155355

DAS
38
9-89

647.3914 BREAKAWAY
TIP REV. C

3/7/2017

Yes

2/7/2017

6.00

\$11.55

\$69.30

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

2/22/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913024

Date: 08-Mar-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

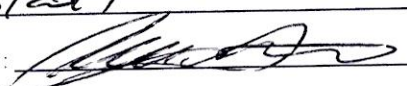
CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
10 ea	Part: 647.0110 Roof Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20726 PO: PO35353	Rev: A Line: 7	
4 ea	Part: 647.1712 Gusset Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20727 PO: PO35353	Rev: E Line: 8	
6 ea	Part: 647.3914 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20728 PO: PO35353	Rev: C Line: 9	SP17-03-9
DATE: 03/03/2017			
CERTIFIED SIGNATURE: 			
RECEIVER SIGNATURE: _____			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.			
MADE IN CANADA.			